

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A semiconductor laser device in which, on a GaAs substrate, there are stacked in sequence at least a lower guide layer, an InGaAsP quantum well active layer composed of one or a plurality of well layers and a plurality of barrier layers alternately disposed and an upper guide layer, wherein

the semiconductor laser device has an oscillation wavelength of larger than 760 nm and smaller than 800 nm, and

an interface protective layer is provided at least one of between the quantum well active layer and the upper guide layer and between the quantum well active layer and the lower guide layer, wherein

the interface protective layer is formed of GaAs, and

the interface protective layer has a thickness of not more than 30 Å.

2-3. (Canceled)

4. (Original) The semiconductor laser device according to claim 1, wherein the upper guide layer and the lower guide layer are formed of AlGaAs.

5. (Original) The semiconductor laser device according to claim 4, wherein an Al mole fraction of the upper guide layer and the lower guide layer is more than 0.2.

6. (Original) The semiconductor laser device according to claim 1, wherein the well layer has a compressive strain.

7. (Original) The semiconductor laser device according to claim 6, wherein a quantity of the compressive strain is not more than 3.5 %.

8. (Original) The semiconductor laser device according to claim 1, wherein the barrier layers have a tensile strain.

9. (Original) The semiconductor laser device according to claim 8, wherein a quantity of an absolute value of the tensile strain is not more than 3.5 %.

10. (Withdrawn) A method of producing a semiconductor laser device having at least an AlGaAs lower guide layer, an InGaAsP quantum well active layer composed of one or a plurality of well layers and a plurality of barrier layers alternately disposed and an AlGaAs upper guide layer on a GaAs substrate, the method comprising:

a first process in which the lower guide layer and a GaAs lower interface protective layer are sequentially crystal-grown at a first growth temperature;

a second process in which, after the first process, the growth is interrupted, and the growth temperature is lowered to a second growth temperature;

a third process in which, after the second process, the growth is resumed to sequentially grow the quantum well active layer and a GaAs upper interface protective layer;

a fourth process in which, after the third process, the growth is interrupted, and the growth temperature is raised almost to the first growth temperature; and

a fifth process in which, after the fourth process, the growth is resumed to grow the upper guide layer on the GaAs upper interface protective layer.

11. (Original) An optical disc unit including the semiconductor laser device of claim 1.